



Семинар
«МАЛОЧАСТИЧНЫЕ СИСТЕМЫ»
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аудитория им. Д.И.Блохинцева

NONLINEAR SCHRÖDINGER EQUATION ON A STAR-GRAPH

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A star-graph is a simple example of metric graph. It can be understood as the metric space obtained by N half-lines (the edges) with identification of the origins (the vertex). Posing the NLS on a star-graph is equivalent to consider N nonlinear equations on the half-line coupled by a suitable gluing condition in the origin. In my talk I will focus attention on the gluing condition of δ type with coupling constant α and on the NLS equation with focusing nonlinearity of power type.

I will discuss several results concerning the existence of stationary solutions and traveling waves, and the stability of the ground state.

This work is the result of a collaboration with R. Adami, D. Finco and D. Noja.